



Medical likely needs to be broken into diagnostic (not included in the REID) and research (included in the REID)

Careful review of the current report style reveals many opportunities to improve exposure and cancer risk communication to stakeholders. The first page of the report is dedicated to space exposures. For career planning purposes, a highly important aspect of the report to crew and flight surgeons is the remaining duration an astronaut has until the NASA limit is reached. Because this value is not fixed, a range is now given that reflects how this limit might vary with environmental parameters and astronaut age and sex. Reported REID values reflect the 95th percentile of the distribution since this value is defined as the risk limit in NASA Standard 3001. A condensed format of additional exposures is included in subsequent pages for record keeping purposes. The NRC recommends that NASA no longer include diagnostic medical exposures in the REID calculation as the benefits from these diagnostics outweigh the risks from radiation. If implemented, only elected medical research studies which contain an ionizing radiation component will be included in the REID calculation. Thus, flight surgeons and their crew are empowered to make decisions regarding medical care without being constrained by the NASA risk limit. While medical exposure doses will be presented in the report, risk estimates from these will not be individually calculated. Each medical exposure that does contribute will be included in the occupational exposure total. More adjustments can likely be made to further improve risk communication. Feel free to contact the authors with any feedback.